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Dupuytren's Contracture

Dupuytren's contracture is essentially a hereditary disease of adults, occurring 9 times as frequently in males as in females but rarely among Negroes or Orientals. Since it becomes manifest in the later decades, statistics vary according to the selection of material for analysis. The incidence has been placed as between 1 % and 2 % of the population.

Diagnosis. The diagnosis of this condition is rarely in doubt. In its earliest forms there may be some confusion with simple callus. The localized hardened plaque of skin appearing along the ulnar side of the distal palmar crease, later creating crescentic dimpling of the adjacent skin as contracting scar pulls it firmly down onto the aponeurosis, is an almost pathognomonic feature. The base of the ring finger is usually the first to demonstrate changes, followed with decreasing frequency by the little, middle and index fingers and the thumb. A plaque involving the base of both ring and little fingers is a common combination. As the process continues, limitation in extension of the affected fingers intervenes, usually associated with the formation of longitudinal subcutaneous bands that can be felt and frequently seen in the palm, and extending up into the proximal phalanges. In addition to bands, the latter are prone to display a diffuse thickening that spreads over the entire volar aspect and may extend into the middle but rarely into the distal phalanges. Pain is unusual, although in the early proliferative stages mild discomfort is occasionally elicited.

Starting typically in one hand, the disease may progress at varying rates. In general it is a slowly progressive disease, terminating in severe flexion contractures only after a number of years. It is not unusual, however, to note measurable increase in contractures over a period of several months, and at times the disease shows changing rates of growth from year to year. Of the unilateral group, the right hand was involved twice as frequently as the left.

The more overt forms of the disease may possibly be mistaken for congenital contractures of the fingers, spastic contraction or flexor contracture due to injury or infection. In all these latter conditions the typical dimpled palmar thickening of Dupuytren's contracture is absent. Furthermore, shortening of the flexor tendons is a usual occurrence in this group and is readily demonstrated by flexing the wrist, which relieves tension on flexor tendons and permits the finger joints to straighten. A flexor contracture of the Dupuytren's type, caused primarily by subcutaneous bands, will not demonstrate such release of finger joints by simple wrist positioning.

Treatment. Several nonoperative approaches have been applied to Dupuytren's contracture, with indifferent results. Radiotherapy at best has shown only occasional temporary arrest in the early cellular phase. Vitamin E has been advocated in the treatment of early forms of the disease. Steinberg found that 6 of 7 cases treated by doses of 300 mg. of Vitamin E daily were improved during the period of treatment, which extended over several weeks, but no long-range follow-up studies were reported. King was unable to obtain any measurable effect with Vitamin E, although patients occasionally noted some subjective improvement; he advised against the use of the tocopherols in this condition.

The status of cortisone in the treatment of Dupuytren's contracture is still undetermined. Baxter and his associates successfully treated by this method a patient with Dupuytren's contracture, in whom disabling fibrosis developed postoperatively, but no relation of the effect of cortisone to the primary disease was implied.

In spite of these and many other attempts to provide a nonoperative cure, the fundamental concept of treatment as laid down by Dupuytren is still the method of choice. His original approach consisted of multiple divisions of the contracting bands together with the overlying skin followed by splinting the fingers in extension and maintaining this position during the contractile phase of healing by secondary intention. Twenty years later Fergusson emphasized the necessity of excising the contracted fascial bands in order to avoid recurrence, but it remained for Lexer to carry this concept to its logical conclusion by routinely carrying out a complete excision of the palmar aponeurosis. The majority of surgeons adhere to this concept today, although there has been a recent tendency to seek less drastic procedures that might give acceptable results.

A method of surgical correction utilizing a so-called "compression suture" has been successfully employed by the author in eliminating postoperative boggiiness and hematoma, which have frequently prolonged convalescence after resection of the palmar aponeurosis. (New England J. Med., 22 May 1952, R. C. Tanzer)

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Surgical Closure of an Aortic Septal Defect

Congenital communication between the first parts of the ascending aorta and the pulmonary artery, just above the semilunar valves, is an uncommon lesion but deserves some consideration because it can mimic the clinical picture of a patent ductus arteriosus and because it maybe possible in some instances to treat the anomaly successfully by surgical means.

An opening between the first part of the aorta and the pulmonary artery will obviously give clinical findings quite similar to - and usually indistinguishable from - those of a persistent ductus arteriosus, which is a communication between the two systems situated somewhat further along between the vascular channels. Because of the pressure differentials, the shunt is almost invariably left to right; therefore cyanosis is seldom observed, except in terminal stages of cardiac failure. Some degree of dyspnea or diminution of exercise tolerance is often noted. Some retardation in physical development may be found. A murmur is always present; it is usually continuous, with systolic accentuation. It has been described as systolic alone, or as systolic with only a short diastolic phase. These murmurs are most intense in the second and third intercostal spaces, to the left of the sternum; they can duplicate those which originate from an open ductus. In some cases the murmur has been accompanied by a thrill. The diastolic blood pressure is somewhat reduced, and in some instances gives a pulse pressure wide enough to produce a water-hammer pulse in the arms and legs. By film and

fluoroscopic studies there is evidence of a left to right shunt, giving some cardiac enlargement, fullness of the pulmonary conus, enlargement of the pulmonary artery, increased vascularity in the pulmonary bed, and a hilar dance; all of these findings are exactly those produced by an open ductus. The various clinical and roentgenologic findings probably vary in intensity from case to case, depending upon the size of the aortic leak. By electrocardiography the electrical axis may be normal, is apt to be shifted to the left, but has been described as rotated to the right. By cardiac catheterization there is evidence of a left to right shunt into the pulmonary circuit, and the findings may be entirely those suggesting an open ductus unless the catheter can by good fortune be made to pass through the communication which lies just above the pulmonary valve, thus proving the existence of an aortic septal defect. Angiocardiography is of practically no help in differentiation from an open ductus, for both show the continued recirculation through the pulmonary circuit. Retrograde aortography has demonstrated clearly the presence of an aortic septal defect.

At the operating table it is possible to differentiate quickly between an open ductus and an aortopulmonary window. In the former a thrill can be felt in the pulmonary artery, opposite the distal end of the aortic arch; digital pressure over the ductus abolishes the thrill. Conversely, an aortopulmonary defect gives a thrill which is most intense in the first part of the pulmonary artery, just above the pulmonary valve and within the pericardial envelope. Digital pressure in this region is necessary to shut off the thrill; compression in the area of the ligamentum arteriosum has no effect on the pulmonary artery turbulence.

A case is reported in which surgical attack has been made on a defect between the first portions of the aorta and pulmonary artery, this patient having been followed for 3 years since surgical closure at 4 years of age. As far as is known, this is the first instance of successful surgical correction of this congenital abnormality. (Circulation, June 1952, R. E. Gross)

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Repair of Dural Defects With Gelatin Film

Defects in the dura mater remaining after the removal of certain intracranial tumors or the excision of cortical scars have always presented a problem to the neurological surgeon because adherence of the brain to overlying structures, with subsequent formation of fibrous scar tissue, may give rise to epileptic attacks.

In attempts to prevent adhesion of the brain many different tissues have been used to close these dural defects, including fascia lata, periosteum, temporal fascia, and muscle. Likewise, the dura remaining in the wound has been split into two layers so as to bridge the defect with the extra area of membrane so produced; but though this can be done with small defects and a thick dura, it may not be possible in the frontal region, where the dura is closed thin: the large defects provide problems insoluble by such a process.

Various foreign substances have also been used, among them "Cellophane," amniotic membrane, tantalum foil, fibrin foam, and "Gel-foam" film. From the multiplicity of methods it is evident that the ideal substance has not yet been discovered.

The use of gelatin film was reported by Busch et al. (1949) but it was considered unsuitable for repairing dural defects. Weisel et al. (1950) gave a detailed account of gelatin implanted into chest wounds as a temporary closure for pleural defects, and found that the implants were completely absorbed between 8 and 14 days: tissue reaction was minimal, and the normal pleural regeneration did not seem to be hindered by the presence of the gelatin film.

The present author here compares the results achieved with tantalum foil and with gelatin film in relation first to the postoperative convalescence and secondly to the incidence of subsequent epilepsy.

This series of cases dates from 1945, and in the first few years tantalum foil was used to close almost all the dural defects. Later, Allen & Hanburys produced a gelatin film large enough to close the largest defects. This film is a thin transparent membrane, supplied sterilized in tubes, which closely resembles cellophane until it is moistened with saline solution, when it immediately becomes soft and is easily tucked in beneath the edges of the dural defect. No fixation of the implant appears necessary, because it sticks quite easily to the underlying brain.

The series consists of 60 cases of intracranial meningioma after the removal of which dural defects remained, 30 being treated with tantalum-foil implants and 30 with gelatin film. The series is consecutive except for half a dozen cases in which fibrin foam or film was used; these have been excluded as providing too small a number of cases to give data comparable with those of the gelatin or tantalum groups.

The size of the defect varied considerably, but none was smaller than 4 x 4 cm.; thus, if an implant had not been made, quite a large area of brain would have been exposed to the risk of adhesion to overlying bone, periosteum, or galea.

Postoperatively there were no deaths in the tantalum series but there were 3 in the gelatin group. In none of the fatal cases was there any suggestion that the implant was at fault, for there was no evidence of infection, death being due to other causes.

An attempt has been made to assess differences in the postoperative course in the two groups by considering such items as leaks of cerebrospinal fluid, late healing, and extrusion or removal of the implanted substance.

Late healing indicates that a given wound was not healed and dry 48 hours after operation, when all the sutures are normally removed. In most of these cases of late healing the wound continued to discharge a little fluid, old blood, or C. S. F., for several days. In the gelatin series all were healed within a week.

It seems evident, even from such small numbers, that the gelatin implants gave much less trouble than did the tantalum implants. Six patients required subsquent operation for removal of the tantalum because of persistent discharge from their wounds or because of breakdown weeks or months later from low-grade infection. In each of these 6 cases the operation revealed a mass of soft

greyish granulation tissue containing pockets of pus, with the tantalum crumpled among this tissue. In 3 of the 6 cases a low-grade osteomyelitis of the bone flap had developed, and the bone flaps had to be removed. In spite of this a good new dural membrane had formed beneath the tantalum, and no patient had an infection of the intracranial contents deep to this membrane.

The gelatin series provided no example of sepsis, osteomyelitis of the bone flap or need for removal of the implant.

Epilepsy is, of course, a common symptom in the supratentorial meningiomas, particularly where the tumor lies over the convexity of the brain or along the superior longitudinal sinus. A comparison has been made of the incidence of preoperative and postoperative epilepsy in the two groups and of recurrent and acquired epilepsy after operation, and these results have been contrasted with those described by Cushing and Eisenhardt (1938). Cushing and Eisenhardt rarely used an implant to close dural defects although they mention occasionally covering the raw brain surface with a delicate film of gutta-percha.

There is a small but probably significant decrease in both recurrent and acquired epilepsy in the present series where tantalum or gelatin have been implanted. In the series of Cushing and Eisenhardt (1938), 45 % of patients surviving operation continued to suffer from epilepsy, whereas the present series showed an incidence of 29 % of continued seizures.

The follow-up in these cases is as yet too short for a final assessment of the continued-epilepsy rate to be made. (Lancet, 10 May 1952, W. McKissock)

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The Use of Banthine Bromide in Infantile Colic and Vomiting

The medical management of infantile colic and pylorospasm in the newborn period has always been a difficult problem for the pediatrician because of the transient and varied nature of these symptom complexes. In view of the pharmacologic actions of banthine, the authors felt that this new drug was worthy of a trial in treating cases of infantile colic and vomiting.

Banthine bromide was administered to 50 infants, ranging in age from 1 to 32 weeks. Twenty-five infants were between 1 and 4 weeks of age, and only 4 infants were above 2 1/2 months of age. Sex distribution was almost equal, with 26 male and 24 female infants. The cases were divided into 3 groups, according to the most troublesome symptom; 23 infants had pure colic, 12 had vomiting, and 15 had both colic and vomiting. The drug was usually administered in 5 mg. doses 4 times a day. Banthine is an extremely bitter-tasting drug which is difficult to disguise in a vehicle, but was apparently accepted by all the infants. It was dispensed in a 5 mg. dosage capsule, or in sterile water containing 5 mg. per teaspoonful. The dose was usually dispersed into a formula feeding.

In adults, toxic effects that have been noted are: excessive dryness of the mouth, urinary frequency and slowness of the urinary stream, some lack of visual accommodation, urinary retention in patients with benign prostatic hypertrophy, constipation and tachycardia. Benson and co-workers recently tested

the sensitivity, toxicity and tolerated dosage of banthine in children. Skin tests were performed on 415 cases, of which 5 had local erythematous reactions. Two children had systemic manifestations consisting of flushing, tachycardia, irritability, dryness of membranes and pupillary dilatation. In 85 conjunctival tests, 63 developed mydriasis but no inflammatory reactions occurred. However, both skin and conjunctival tests were not of value in determining generalized sensitivity to banthine. According to these authors, children tolerate banthine well. No blood, renal or liver disturbances occurred with its use. Banthine dosage for children must be individualized for each patient. A suggested approximate dosage schedule is 12.5 mg. b.i.d. or t.i.d. for newborn infants; 12.5 mg. to 25 mg. q.i.d. for infants from 1 to 12 months of age; and 12.5 mg. to 50 mg. q.i.d. for children over 1 year of age.

In this investigation no toxic effects were observed with an individual dose of 5 mg. Two infants had marked flushing with individual 10 mg. doses but did not have flushing with 5 mg. doses. Five infants received total daily doses of 30 mg. without any apparent toxic manifestations.

The results in individual cases were classified as good, moderately good, or poor. Over-all, there were 34 good results, 6 moderately good results and 10 poor results. Usually a good result occurred within 24 to 48 hours and was most dramatic in the cases of vomiting, and colic and vomiting. Of the 8 patients who had previous drug therapy without satisfactory results 7 had good results and 1 had a poor result with banthine therapy. Although definite conclusions are not justified in a series of 50 cases, it is believed that banthine bromide has a definite place in the drug therapeutic approach to infantile colic and vomiting as a symptomatic or possible curative agent. Further investigations are in progress to explore the usefulness of banthine in pediatric therapy, particularly in x-ray proved cases of pylorospasm. (J. Pediat., May 1952, H. Levy & B. M. Zweifler)

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Clinical Ballistocardiography in Office Practice

The purpose of this paper is to indicate the value of the ballistocardiogram in cardiac diagnosis in actual practice in the light of present knowledge. The foundations of ballistocardiography have been laid securely and it is being used with success in cardiac diagnosis.

The electrocardiogram measures electrical waves of cardiac origin. The ballistocardiogram measures a different and more vital function of the heart; the effect of the mechanical pumping action of the heart. These "recoil waves" when picked up and recorded produce a tracing known as a ballistocardiogram. The peaks and nadirs of the waves have been arbitarily named G. H. I. J and K. G to H is a headward stroke, occurring simultaneously with the first heart sound. It represents the beginning of ventricular systole. J to K is a footward wave whose nadir occurs simultaneously with the closing of the aortic and pulmonary valves or the second heart sound. The time interval from G to K represents ventricular systole. The normal heart contracts and ejects blood with a

characteristic "snap" which is reflected in the amplitude and form of HIJK strokes. The waves following L, M, N, O, et cetera, are diastolic waves of which little is known at present. Various conditions, both cardiac and extracardiac, may alter this normal pattern. Research in ballistocardiography is concerned greatly with what are normal patterns and normal variations as well as with what are abnormal tracings and their clinical significance.

Anyone who can read electrocardiograms can, with some additional effort, learn to interpret ballistocardiograms. Even if one does not plan to do ballistocardiography, it is wise to learn more about what the ballistocardiogram can and cannot do, so this instrument may be used as an aid in cardiac diagnosis.

Taking a ballistocardiogram is neither difficult nor time consuming. Ballistocardiograms should be taken on a fasting stomach since eating tends to increase cardiac output. Caccese and Schrager have demonstrated that cigarette smoking occasionally produces marked transient changes in the BCG which last from 1 to 20 minutes. Therefore it is advisable to see that the patient has abstained from smoking for at least one half hour before taking the BCG. Failure to observe this precaution may lead to serious diagnostic error. Exercise may produce abnormalities in the ballistocardiogram which are not present at rest. The normal myocardium responds to exercise by increasing output which is reflected in the amplitude of the complexes. Diminished or no increase in output is considered abnormal.

In a few cases it is impossible to obtain satisfactory ballistocardiograms. When body tremor or muscle tics are present (or when the patient is uncooperative) the trace becomes unreadable. Tachycardia over 140 or very rapid breathing also makes the tracing unsatisfactory. If the patient is exceedingly "nervous", reassurance and rest will help. Occasionally sedation is required. A newcomer in the field of ballistocardiography may confuse abnormality of the ballistocardiogram with artifacts due to somatic tremor. Experience soon enables one to tell the difference at a glance.

The ballistocardiogram is a useful instrument in cardiac diagnosis and should be included with the electrocardiogram in the clinical diagnostician's armamentarium. However it will not give a rubber stamped diagnosis. It is no substitute for a good history, complete physical examination and a careful work-up and evaluation of findings. The ballistocardiogram will never supplant the electrocardiogram. Rather it will complement it and help to show abnormalities which the electrocardiogram fails to reveal. At the same time the electrocardiogram should act as a check rein on the ballistocardiogram. While serious heart disease may exist in cases where the ballistocardiogram is abnormal and the electrocardiogram is normal, the prognosis is usually worse when both are abnormal. An abnormal ballistocardiogram, especially among older subjects, does not necessarily mean an unfavorable prognosis. When effective treatment for arteriosclerosis becomes practical, such treatment will undoubtedly achieve better results as a preventive measure or in the treatment of the early stages. Early diagnosis in coronary artery disease will then be even more important than it is now. At present the ballistocardiogram is the best instrument available for the early detection of this condition. (J. M. Soc., New Jersey, June 1952, F. J. Brown)

Pericarditis

Pericarditis must be considered as a possibility, in obscure conditions, if it is to be recognized as often as it occurs. The history or findings of etiological conditions that commonly cause pericarditis should alert the physician and render the condition open to suspicion. The clinical case study may or may not reveal an etiological factor, even with extensive clinical investigation.

The cardinal symptom of pain or distress may be characteristically propagated to the left shoulder or neck or may be only a vague distress in the precordium or the epigastrium. Dyspnea may be the equivalent of, substitute for, or may follow the pain. The pathognomonic sign is the pericardial friction rub which may often be felt or heard when the breath is held in expiration. Bulging of the precordium or the intercostal spaces or distention of the neck veins may be noted. The sharply demarcated and widened cardiac or upper retrosternal dullness is rarely demonstrable. The auscultatory finding of the friction rub and/or very distantly muffled heart sounds are the most reliable clinical signs. Further data obtained by fluoroscopy, teleradiography, kymography, electrokymography and electrocardiography are the most acceptable accessory diagnostic aids.

The treatment of pericarditis is determined by the etiological factor and the anatomic changes that have been established. Antibiotics used against primary infection often prevent and/or abort a pericarditis. Serous effusions only occasionally require paracentesis. Purulent exudate usually requires surgical drainage. Two cases of tuberculous pericarditis have convinced the authors that pericardiectomy should be considered early, immediately after a course of streptomycin and PAS therapy. Aureomycin may be considered as worthy of trial in patients with acute idiopathic or nonspecific pericarditis. (Am. Heart J., May 1952, G. R. Herrmann, E. J. Marchand, G. H. Greer & M. R. Hejtmancik)

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The Antibiotic Therapy of Tuberculous Meningitis

Forty cases of tuberculous meningitis in children are reported from North Reading State Sanatorium, Massachusetts. Comments on the literature, details of treatment regimens and results are outlined in the original article, and suggestions for prevention of fatal or crippling meningitis are mentioned.

The following conclusions appear indicated on the basis of the authors' observations:

Antibiotic therapy has resulted in a markedly better prognosis for tuberculous meningitis in children. Streptomycin is by far the most important drug used in the treatment of tuberculous meningitis. The drug should be administered both intramuscularly and intrathecally. The minimum intrathecal dose is 50 mg.; the minimum number of injections is about 65.

The addition of PAS increases the survival rate, especially in patients with miliary tuberculosis. The status of Promizole is as yet undetermined.

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The coexistence of active disease in the lungs makes the prognosis worse. The prognosis is very poor in children two years of age or younger.

The incidence of serious neurologic disorders is alarmingly high, and to date the only remedy is early diagnosis and prompt and adequate treatment. (New Eng. J. Med., 5 June 1952, L. Ravreby, G. H. Caron & V. A. Georgantas)

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Acanthrocytosis

In 1950 Bassen and Kornzweig reported observations on an 18 year old girl who, after having been afflicted with celiac disease in early childhood, exhibited (1) atypical retinitis pigmentosa, (2) diffuse involvement of the nervous system (particularly the spino-cerebellar tracts) and (3) a hitherto undescribed malformation of the circulating erythrocytes. The latter showed an unusual degree of "crenation" characterized by protoplasmic projections of varying sizes and shapes, which gave the cells a bizarre appearance simulating small crabs, beetles or stars. In the film, many of these erythrocytes were small and deeply stained, thus resembling spherocytes with buds or pseudopods. The hypotonic fragility was slightly decreased. There was only a mild anemia (Hgb 11.3 Gm; RBC 3.9 M.). No data were reported to indicate whether a hemolytic process existed. A younger brother of the patient had almost identical changes of the eye grounds and red cells, but no neuropathy. The parents were first cousins.

In the present communication, clinical and laboratory observations on a 13 1/2 year old boy are reported. He shows an analogous malformation of his red cells associated with a similar diffuse, progressive neurologic disease. However, retinal changes are not apparent. The patient also had suffered from a celiac syndrome in his early years of life. His parents are second cousins.

Since the most conspicuous feature of these abnormal erythrocytes is their distorted "thorny" appearance in wet preparations and in the film, the present authors have called them acanthrocytes (akantha, thorn in Greek). The occurrence of these misshapen red cells together with diffuse progressive neuropathy, on the basis of consanguinity of the parents, is unlikely to be merely coincidental and may be characteristic of a new hereditary syndrome.

In the 13 1/2 year old boy, the erythrocytic anomaly consisted of an unusual type of "crenation"; the deformed red cells showed several, irregularly spaced, large and coarse projections on their surface which varied in width and length. Many of these "acanthrocyte" cells resembled spherocytes with pseudopods. The acanthrocytes exhibited a slightly decreased osmotic, a markedly increased lysolecithin and mechanical fragility, but a normal heat and acid fragility.

The hemolytic index was within normal range, a finding which seems to preclude the existence of an exaggerated hemolytic process in vivo.

It is suggested that acanthrocytosis is genetically conditioned, and due to a mutant recessive allele for a gene which controls the normal architecture of the red cell. Further observations are required to establish whether the association of acanthrocytosis, celiac disease in early childhood, and ataxic neuropathy with

or without retinitis pigmentosa constitutes a new hereditary syndrome. (Blood, June 1952, K. Singer, B. Fisher & M. A. Perlstein)

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Treatment of Cystic Acne Vulgaris With A Cutaneous Vasoconstrictor (Kutapressin)

Various treatments have been proposed for acne, based on the various hypotheses which have been advanced for its etiology. In lieu of a solution to the etiologic complex of acne, treatment must of necessity be empirical, based on relief of the dermatologic lesions and treatment of any coexistent conditions which seem to predispose to development of the lesions. Topical application for peeling the skin and for correcting excessive oiliness is commonly used. The chief agents used for this purpose are sulfur, resorcin, salicylic acid and carbon dioxide snow (cryotherapy). The latter is limited in its use because the patients object to it. Some of these methods are too strong and are irritating to the skin, hence, if used excessively may aggravate the acne rather than improve it. X-ray treatment, which is also a peeling method, is limited because it may destroy and permanently stop activity of the sebaceous glands. Hence, it cannot be repeated in resistant cases. Vitamin therapy in acne has received much emphasis. Although the rationale for the use of the various vitamins is obscure, the wisdom of improving the nutritional state of an acne patient cannot be denied. The use of estrogens in the treatment of acne is abundantly covered in the literature.

Twenty-two refractory cases of cystic acne vulgaris were treated by the author with Kutapressin, a newly discovered cutaneous vasoconstricting principle obtained from liver. The optimal regimen to follow was considered to be thrice-weekly injections of 1 cc. of the drug. In some cases the frequency of injections was reduced to two weekly, although it was evident that the best results were obtained when the injections were given three times a week. The patients ranged in age from 13 to 27 years. Thirteen were above the age of 18. There were 15 females and 7 males. Treatment was continued for as long as necessary to obtain optimal results; some are still being treated. Adjunct therapy was administered as follows: 2 patients were given massive doses of Vitamin A and local therapy; 2 others received estrogens and massive Vitamin A; and a fifth patient was given estrogens.

To date a total of 327 injections have been given to these 22 patients. One patient received 24 injections, and another one 2 injections. The majority received from 12 to 20 injections. The importance of regularity in taking the injections was stressed.

From both objective and subjective observations, in general there was a high degree of improvement in the acneiform lesions, with noticeable regression of scars and pits, giving the skin a more smooth and normal appearance.

The author concludes: 1. Kutapressin is effective in treating cystic acne vulgaris.

2. Kutapressin effects gross changes in the size and structure of the scars and pits in acne.

3. Kutapressin is well tolerated by the subcutaneous or intramuscular routes. Being used parenterally, it can be given along with topical applications.

4. While massive doses of aqueous vitamin A produced some improvement in these cases, a higher degree of improvement was possible with Kutapressin. (J. Indiana M. A., June 1952, M. M. Nierman)

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The Use of Red Cell Mass in Rheumatoid Disease

Anemia, as an associated phenomenon of rheumatoid disease, usually begins insidiously, may become moderately severe as the disease becomes well established, and is of the normocytic or microcytic, hypochromic variety.

Clinical investigation of this feature has been mainly directed towards the etiological aspect. In the experience of the authors and others, the anemia of this disorder has been highly refractory to iron therapy. Transfusions of whole blood have been recommended by several investigators as adjunctive therapy, but they have noted no striking effect on the course of the disease. The authors became interested in the possibility of the existence of a dilution factor as the responsible mechanism, and so turned their attention from relative measurements of anemia as recorded by hemoglobin and hematocrit estimations to a critical study of blood and plasma volumes.

The patients studied were those admitted to the Rheumatic Disease Section, Veterans Administration Hospital, Wood, Wisconsin. All patients had been treated in the period between 1948 and 1951. Follow-up records range between 3 months and 3 years. Most of the patients had Stage II or Stage III illness. (American Rheumatism Association classification).

The red cell mass was supplied by the Milwaukee Junior League Blood Center, and cross-matching and accurate assessment of all other factors were made routinely. Transfusions were given in courses of 4, 6, or 10 units. Each transfusion consisted of 1 unit of red cell mass (that is, the sedimented cells of 1 pint of whole blood after the plasma is withdrawn). Mild transfusion reactions were noted in only 2 cases.

Thirty patients with rheumatoid disease treated by red cell mass transfusion and adequately followed up clinically and biochemically are considered in this paper. All patients showed an improvement in the levels of hemoglobin, sedimentation rate, hematocrit, and blood volume. Total blood volume was somewhat higher in 25 normal individuals than in 25 rheumatoid patients but the most significant observation was the finding of a substantial increase in plasma volume in the rheumatoid as compared to normal individuals.

The anemia of rheumatoid disease appears to be due to an increase in the plasma volume. Transfusions of red cells restore the normal cellplasma relationship and thus constitute a useful supplement to therapeutic armamentarium.

Red cell mass transfusions should be employed with greater frequency in the management of the rheumatoid patient.

A course of not less than 6 and not more than 10 units, given as 1 unit daily, will produce the most beneficial results; such courses may be repeated as required.

At this time the authors employ the following criteria as indications for red cell mass transfusions:

(1) active disease which does not respond to other usual forms of treatment; (2) hemoglobin estimations under 11 gm., or hematocrit readings below 40 %.

While this form of treatment has proved both economical and satisfactory it should be remembered that the dangers of transfusion reactions are ever present and great care should be exercised in the use of red cell mass therapy. (Am. J. M. Sc., June 1952, M. W. Garry)

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Surface Hardness, Compressive Strength, and Abrasion Resistance of Indirect Die Stones

The common use of the indirect method in the preparation of dental inlays, three-quarter and full crowns, various bridge forms, and other dental castings, together with the appearance on the market of newer type gypsum products for use as dies, indicates a need for more knowledge of some of the physical properties of the quick-setting artificial stones. In addition, an understanding of the best method of die preparation is necessary in order that the stone may be used to its fullest advantage. Every dentist who includes in his practice gold castings, or other precision technics requiring dies, should have a thorough knowledge of the factors involved in the fabrication of the die which lead to its improvement. Such a study should enable him, with a minimum of extraneous effort, to produce the most satisfactory stone die obtainable by practical methods.

It was the purpose of this study to investigate the properties of hardness, strength and abrasion resistance of various products when subjected to special treatments of soaking in oil or water for different periods of time. A further comparison was made of stones normally manipulated and after being centrifuged. Comparison was made also of the properties of regular dental stone and the newer improved stones. On the basis of these studies, the following conclusions were reached:

1. A comparison of the hardness of the regular stones examined indicates that the values are similar. This is also true for the improved stones, which are appreciably harder than the regular stones.
2. The improved stones attain their maximum hardness in a shorter time interval than do the regular stones; 3 days seems to be optimum for the improved stones.
3. Neither oil nor water immersion treatments improve the hardness of the dental stones investigated.
4. The dry crushing strengths are greater than the wet crushing strengths.

5. The crushing strengths of the improved stones are similar, as are those of the regular stones, but the improved stones have appreciably higher values than do the regular ones.

6. Oil and water immersion treatments definitely decrease the crushing strengths of the dental stones investigated.

7. Improved stones are more resistant to abrasion than are regular stones.

8. The weight loss due to abrasion decreases with aging time up to one week, the longest time tested.

9. Oil treatment does not improve the resistance of the stones to abrasion.

10. Abrasion loss increases in an approximately linear fashion as the load on the specimen of improved stones is increased.

11. Centrifuging increases the hardness for early periods after setting, but does not influence the long time values. (J. Pros. Den., May 1952, F. A. Peyton, J. P. Leibold & G. V. Ridgley)

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Relationship Between Inoculations and Poliomyelitis

On 14 March 1952 the Public Health Service sponsored a conference of 42 poliomyelitis investigators, epidemiologists, pediatricians, allergists and health officers. The conference voted unanimously in favor of the following conclusions:

"There is no definite evidence that an increase in the number of cases of poliomyelitis has occurred as a result of injections of vaccines, drugs, and other medicinal agents. There is evidence that injections for the prevention of diphtheria, whooping cough and possibly tetanus, when given during an epidemic of poliomyelitis, may, on rare occasions, localize the paralysis in the inoculated arm or leg. There is no satisfactory evidence that other types of injections have any effect on the localization, frequency or severity of poliomyelitic paralysis. In the small number of persons with localization of paralysis in the inoculated limb, the injections, for the most part, were given about 7 to 21 days prior to onset, which corresponds to the usual incubation period of poliomyelitis. This has raised the question as to whether or not inoculated persons have a greater chance of contracting poliomyelitis during an epidemic.

"There is as yet no final answer to this question, but it is a fact that, even if there should be an increased chance, it is extremely small. Many thousands of poliomyelitis cases occur every year among children who have not had any injections during the preceding few months, and thousands of children have received injections for whooping cough, diphtheria, and tetanus during poliomyelitis epidemics and have not developed the disease.

"Diphtheria, tetanus and whooping cough are serious diseases which can be prevented by immunization. Unchecked, these diseases present a far greater hazard than poliomyelitis. The benefits derived from immunization against these diseases far outweigh the questionably small increased chance of contracting poliomyelitis. However, even this questionable risk can be avoided by carrying

out these immunizations when poliomyelitis is not epidemic in the community. There appears to be no good reason for withholding these immunizations during the summer months in communities that are not having an epidemic of poliomyelitis.

"Furthermore, poliomyelitis is at all times so rare in infants under 6 months of age, and the danger from other infectious diseases, particularly whooping cough, is so great, that it is advisable to continue the immunization procedures for this age group even during a poliomyelitis epidemic. In adults, also, poliomyelitis is relatively so infrequent that, when there is a need for immunizing or therapeutic injections, such injections should not be withheld.

"Certainly no parent should object and no physician should hesitate to administer a needed antibiotic, drug or other injection for treatment of diseases at any time. When there is immediate danger from diphtheria, whooping cough or tetanus, the preventive inoculations should be given to all threatened age groups even during a poliomyelitis epidemic. In the final analysis, the decision as to when an immunizing or therapeutic injection shall be given to an individual patient must rest with the physician." (J. A. M. A., 10 May 1952, Editorial)

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Course in Medical Basic Sciences

1. Announcement is made of the Army Medical Service course of instruction in Medical Basic Sciences to be conducted at the Army Medical Service Graduate School, Walter Reed Army Medical Center, Washington 12, D. C. The course will be twenty-three (23) weeks in length, starting 8 September 1952 and graduating 27 February 1953. The reporting date is 5 September 1951.

2. The purpose of this course is to provide selected medical officers of the Armed Forces with training in the basic sciences as applied to clinical medicine, and to enhance the formal residency training of medical officers enrolled in the Medical Service Graduate Professional Education Program. The American Board of Internal Medicine has approved this course of instruction for six (6) months formal training credit.

3. The Army Medical Service Graduate School has allotted eight (8) places for Navy medical officers in this course. Requests must reach the Bureau of Medicine and Surgery prior to 11 August 1952, and may be made by dispatch if the time element involved requires such action. Dispatch requests must be confirmed by following letter. (Professional Div., BuMed.)

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Treatment of Hemophilus Influenzae Meningitis

Eighteen patients with meningitis due to Hemophilus influenzae have been treated with aureomycin alone and 14 with a combination of aureomycin, streptomycin, and gantrisin (a sulfonamide compound). None of these patients died.

When aureomycin was used in doses of 50 mg. per kilogram every 24 hours intravenously, results were as good, as far as duration of fever, pleocytosis spinalis, and complications are concerned, as when the combination was used.

In two patients penicillin in doses of 1,000,000 units intramuscularly every two hours was used with success. One patient, not in these series, who had the encephalitic form of the disease, died in spite of treatment with aureomycin, penicillin, and gantrisin.

Three patients with subdural effusions were successfully treated by repeated aspiration.

From the results obtained in this study, 4 points seem to be of considerable importance. 1. When given in sufficient dose, aureomycin alone seems to give equally good or better results than aureomycin supplemented with streptomycin and gantrisin. 2. When aureomycin is used alone, the dose should be at least 50 mg. per kilogram every 24 hours and early treatment should be by the intravenous route. 3. With the use of aureomycin, deaths from influenza bacillus meningitis should be uncommon, but there is still room for improvement in results as far as morbidity and permanent nervous-system damage is concerned. 4. Penicillin when given in sufficient dose may be effective in some patients with H. influenzae meningitis.

It is concluded that aureomycin used alone is a successful form of therapy in meningitis due to H. influenzae and that no additional advantage is gained by using streptomycin and gantrisin in addition. (A. M. A. Am. J. Dis. Child., June 1952, M. H. Lepper, P. F. Wehrle, N. Blatt)

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Treatment of Brucellosis With Aureomycin or Terramycin Combined With Dihydrostreptomycin

The authors studied the clinical effectiveness of various combinations of chemotherapeutic and antibiotic agents in the treatment of brucellosis. Their experience led to the conclusion that there are two combinations of antibiotics which are, to date, the most effective in the treatment of this disease. One combination consisted of the simultaneous administration of aureomycin and dihydrostreptomycin; the other consisted of the simultaneous use of terramycin and dihydrostreptomycin. These two combinations of antibiotics appear to be equally effective. The impression was gained although not statistically proved, that patients tolerate terramycin somewhat better than aureomycin.

Forty-three patients with culturally proved brucellosis were observed and treated with one of the two combinations of antibiotics just mentioned. Thirty-six of these patients had the bacteremic form of the disease. The bacteremia of 34 of these 36 was owing to Br. abortus, Br. melitensis or Br. suis. The

species causing the bacteremia of the other 2 was not definitely ascertained. Seven had culturally proved brucellosis with localizing lesions. In addition, 17 patients who were acutely ill and had unmistakable evidence of brucellosis, although blood cultures were not positive, have been treated.

In a total of 60 cases there have been two bacteriologic relapses and one symptomatic relapse. Retreatment was necessary in 2 cases. This represents a clinical-bacteriologic relapse rate of 5 %, in other words a recovery rate of 95 %. The follow-up period in this group of cases usually extends over a period of from 3 months to more than 2 years.

The combined use of terramycin or aureomycin and dihydrostreptomycin has not been presented as a specific treatment of brucellosis. On the other hand, the results to date justify the conclusion that the combination of either terramycin or aureomycin with dihydrostreptomycin is far superior to any other currently available method. Furthermore, the undesirable toxic reactions at times found during the use of other methods have not been encountered. (Postgrad. Med., June 1952, W. E. Herrell & T. E. Barber)

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Hemorrhagic Fever, Epidemic Hemorrhagic Fever of the Far East, or Endemic Hemorrhagic Nephroso-nephritis

Note on Incubation Period and Treatment

A number of cases of hemorrhagic fever have been occurring on transports returning from Korea with Army or Marine Corps personnel of our own or other nations. Information on the recommended treatment has been frequently requested. Because the incubation period may exceed 30 days (according to information reported from the field by the Surgeon General's Office, Department of the Army), the onset of this disease may occur within the continental United States even though it is contracted in Korea.

Any patient who develops influenzalike symptoms, with petechia, hemorrhages, positive renal findings, and hypotension and who has recently been in Korea should be strongly suspected of having hemorrhagic fever.

Present knowledge of the condition indicates that symptomatic therapy, as follows, has been most successful: 1. Absolute bed rest; 2. adequate sedation with demerol hydrochloride; 3. combat shock with stimulants, shock blocks, extremity strapping, and salt-poor albumin (see 5 below concerning parenteral fluid restrictions); 4. fluids by mouth are limited to unit replacement for unit excreted until oliguria and vasomotor instability have been overcome; and 5. parenteral fluids for shock or apparent dehydration are contraindicated.

Each new case of hemorrhagic fever originally diagnosed at activities outside the Far East should be reported to the Bureau of Medicine and Surgery by dispatch stating name in full, rank or rate, serial or file number, date of admission to sick list, and the designation of military unit to which

patient was attached when exposed or precise area in which exposed. Dispatch reports should make Commander, U. S. Naval Forces, Far East, an information addressee.

All such cases should also be reported on line 100 of the Morbidity Report, Form DD-442, as diagnosis 1(f) XY Hemorrhagic fever. Such cases should not be included elsewhere in Part 3 of that report.

NOTE: The above was abstracted from the Office of the Surgeon General, U. S. Army, SGO Circular Letter No. 108, 30 June 1952.

For further information on hemorrhagic fever see U. S. Navy Medical News Letter: Volume 18, No. 8, page 2, 19 October 1951, and Volume 19, No. 10, page 2, of 16 May 1952. (Preventive Medicine Div., BuMed.)

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Aptitude Board Actions At Recruit Training Centers 1951

A review of the results of Psychiatric Unit and Aptitude Board actions at recruit training centers for the first 6 months of 1951 appeared in a previous article. With data now available for the second half of the year, the results of these activities for the entire year of 1951 is presented.

These actions are based upon the new physical and mental standards for discharge from the service as prescribed in chapter 18, Manual of the Medical Department, United States Navy. The evaluations are conducted for the purpose of determining those personnel who cannot be expected to perform useful duty. The term "recruit" applies to enlisted or inducted personnel who have not completed their recruit or basic training.

The Psychiatric Units screen each recruit and refer those determined to be unsuitable for service, but who do not have primary incapacitating mental or physical defects, to an Aptitude Board with recommendations that they be separated from the service. In all cases the Psychiatric Units only recommend and the final decision of separation rests with the Aptitude Boards.

The data on which this article is based were abstracted from the Weekly Psychiatric Unit Reports (NavMed-1317) submitted by each of the recruit training centers. During 1951, a total of 295,333 recruits were screened by the Psychiatric Units at the 6 recruit training centers, and of this number, 4,382 were referred to Aptitude Boards for evaluation. Of those referred 4,044 were separated because of unsuitability. Thus out of every 1,000 recruits screened by the Psychiatric Units, 15 were referred to Aptitude Boards and 14 of these were separated from the Navy and Marine Corps. This was about the same experience as in 1950.

In comparing the rate of recruits discharged in Navy Training Centers and Marine Corps Recruit Depots, it was observed that in the 4 Navy Training Centers combined, slightly over 14 per 1,000 of those screened were discharged as com-

pared to approximately 12 out of every 1,000 screened in the 2 Marine Corps Recruit Depots. However, since the number of recruits screened by Psychiatric Units at Navy Training Centers was about two and one-half times as high as the number screened at Marine Corps Recruit Depots, the over-all rate of loss of recruits from the service was not materially influenced by the lower rate for the Marine Corps recruits. Some differences are observed between stations in the percent of total screened who were discharged. The Naval Training Center, Great Lakes, had the highest rate of loss, 25 out of each 1,000 screened, with the Marine Corps Recruit Depot, Parris Island, ranking second and showing a loss of almost 16 per 1,000. The remaining training centers all averaged below 10 per 1,000 during 1951.

For all recruit training centers combined, the Aptitude Boards concurred with the recommendations of the Psychiatric Units in better than 90 % of the cases. In fact, this high rate of concurrence was observed at all stations except the Marine Corps Recruit Depot at San Diego, where the Aptitude Board concurred with the Psychiatric Unit recommendations in only 65 % of the cases. (Statistics of NavMed., June 1952)

Course in Medical Aspects of Special Weapons and Radioactive Isotopes

The first course for the fiscal year 1953 in Medical Aspects of Special Weapons and Radioactive Isotopes is scheduled to convene at the U. S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland, on Monday, 4 August 1952, and continue to Saturday, 9 August 1952.

The course will present problems likely to be confronted and technics to be employed by medical and dental officers in the field of radiological activity which are not available to officers in their civilian capacity. The subjects will be presented by speakers of outstanding prominence in their specialties: hence, it is assured the presentation will be interesting and informative to all Medical Department officers.

This course is conducted primarily for the benefit of inactive Reserve Medical Department officers; however, a limited number of officers of the Medical Department on active duty may be given "Authorization Orders" (no expense to the government) in accordance with paragraph 3 of BuPers-BuSandA joint letter of 30 November 1951. Inactive Reserve Medical, Dental, Medical Service Corps and Nurse Corps officers residing in the 1st, 3rd, 4th, 5th, 6th, 8th, 9th Naval Districts and Potomac River Naval Command who desire to attend this course should submit their request for 6 days' training duty to the Commandant's office at the earliest practicable date. Meals and a limited number of sleeping quarters will be available. Quarters will be available on a first come, first served basis.

It is desired to invite inactive Reserve personnel's attention to the fact that acceptance of orders to attend these courses WILL NOT, in any way, increase the possibility of involuntary recall to active duty of the personnel concerned. Therefore, inactive Reserve Medical Department personnel are encouraged to take advantage of this opportunity to attend this course on active training duty orders in a pay status. (Reserve Div., BuMed,)

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Course in Aviation Medicine

The Bureau of Medicine and Surgery announces a class in Aviation Medicine which will convene at the U. S. Naval School of Aviation Medicine, U. S. Naval Air Station, Pensacola, Florida on 6 October 1952.

The course consists of approximately 6 months of academic instruction in Aviation Medicine and flight indoctrination training, and leads to the designation of successful candidates as U. S. Navy Flight Surgeons.

The class will be limited to 30 students and is open to medical officers of the Regular Navy and Naval Reserve in the ranks of Lieutenant Commander and below. Subsequent classes will be convened approximately every 3 months and acceptable candidates whose applications are received too late to be assigned to the October class will be enrolled in subsequent classes.

There is an urgent need for flight surgeons in the U. S. Navy Medical Corps, and it is requested that all eligible medical officers give serious consideration to a career in aviation medicine.

Aviation medicine offers diversified opportunities for general medical practice in addition to certain special opportunities for practice in otolaryngology, ophthalmology, psychiatry and many other specialties. General family practice is afforded at the outpatient clinics at most of the naval air stations. Openings in the fields of aviation medicine research and development are available to those interested in physiology and research.

Medical officers wishing to apply for the course should do so by an official request via the chain of command to the Chief of the Bureau of Medicine and Surgery, which shall contain this service agreement, "I agree to remain on active duty for 6 months following the period of service for which I am currently obligated or for one year following completion of the course, whichever is longer". (Aviation Med. Div., BuMed)

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The printing of this publication has been approved by the Director of the Bureau of the Budget, June 23, 1952.

List of Recent Reports Issued by Naval Medical Research Activities

Naval Medical Research Institute, NNMC, Bethesda, Maryland

Studies on the Use of Tracer Organisms to Follow the Dissemination of Fecal Contamination Aboard Ship, NM 005 006, 24 May 1952.

Injury to Living Cells in Standing Sound Waves, NM 004 005.03.05, 10 December 1951.

A Study of the Degradation of Carpaine to Apocarpyrinic Acid Hydrochloride, NM 007 081.13.01, 4 January 1952.

Decrease of N^{15}/N^{14} Ratio Measurement as a Function of Pump-Out Time for the Nier-Type Isotope-Ratio Mass Spectrometer, NM 000 018.01.05, 30 January 1952.

Electrostatic Interactions in Aliphatic Dicarboxylic Acids and the Kirkwood-Westheimer Theory, NM 000 018.06.08, 5 February 1952.

Mechanical Vibration and Its Effects on Man, Lecture and Review Series 52-1, 6 February 1952.

Plasma Antihemophilic Activity Following Total Body Irradiation, NM 006 012.05.06, 9 February 1952.

Metabolic Studies of Salmonella Anatum in a Synthetic Medium With Growth Controlling Concentrations of DL-Alanine, NM 005 048.19.02, 4 April 1952.

Studies of the Metabolism of Germanium, NM 006 012.04.46, 16 April 1952.

A Colorimetric Method for the Determination of Germanium in Biological Materials, NM 006 012.04.45, 16 April 1952.

Rates of Hydrolysis of Fructose-6-Phosphoric Acid, NM 000 018.06.14, 5 May 1952.

U. S. Naval School of Aviation Medicine, U. S. Naval Air Station, Pensacola, Fla.

Determination of Optimum Time Interval Between Oxygen System Failure and Warning, TED NO. PENAE 519009. (Memorandum Report, 15 February 1952.

The Differentiation Between Symptoms Referable to the Otolith Organs and Semicircular Canals in Patients with Non-suppurative Labyrinthitis, NM 001 059.01.29, 10 March 1952.

Exposure Hazards From Cosmic Radiation Beyond the Stratosphere and in Free Space, NM 001 059.13.03, 31 March 1952.

Medical Research Laboratory, U. S. Navy Submarine Base, New London, Conn.

Effect of Inhalation of Various Carbon Dioxide Concentrations on the Inhibitory Effect of Light Stimuli on Alpha Waves and Muscle Potential Output of the Forehead, NM 002 015.03.07, 17 March 1952.

Naval Medical Field Research Laboratory, Camp Lejeune, North Carolina

A Method of Clearing the Chorion of Aedes Sollicitans (Walker) Eggs and Preliminary Observations on Their Embryonic Development, NM 005 052.23.01, January 1952.

Studies on the Effect of Insecticides and Other Substances on the Oviposition of Aedes Sollicitans (Walker), NM 005 052.23.02, March 1952.

U. S. Naval Medical Research Unit # 3, Cairo, Egypt

Residual Toxicity of Some New Insecticides to House Flies Under Conditions Prevalent in Egypt, NM 005 050.14.02, 31 December 1951.

The Relative Importance of Different Fly-Breeding Materials in an Egyptian Village, NM 005 050.25.02, 31 December 1951.

Observations on the Effect of Some Environmental Factors on the Biology of Musca Domestica Vicina Macq., NM 005 050.12.01, 31 December 1951.

Studies With Chlordane Sprays to Control House Flies in Egyptian Villages, NM 005 050.14.01, 31 December 1951.

An Epidemiological Study of Gastro-Enteritis in Egypt I. Recovery of Human Enteric Pathogens on Meat From Butcher Shops in Cairo, NM 005 050.18.01, 26 May 1952.

A Summary of Recent Studies on Houseflies in Egypt, NM 005 050.33.01, May 1952.

Crossing and Sexual Isolation of Egyptian Subspecies of Musca Domestica (Diptera, Muscidae), NM 005 050.33.02.

Mammals and Their Ectoparasites From Yemen, Arabia, NM 005 050.39.05.

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From the Note Book

1. At the end of June Federal Civil Defense Administration has spent or committed about $90,000,000 for Medical supplies. States were slow to apply for matching grants, so most of the money from June on will be spent on all federal regional stockpiles of Medical supplies. About three-fourths of all CDA money spent so far has gone for Medical purposes. ("Wire From Washington", The Modern Hospital, June 1952.)

2. A series of latex rubber models of normal and abnormal hearts have been prepared for the American Heart Association by Abram Belskie, a medical sculptor. The set consists of 10 different models. The series are of life-sized hearts, have the outlines of the main coronary blood vessels and the reflections of the pericardium shown on the surface. The models are delivered in the natural color of latex rubber and may be painted in a number of ways with any type of paint or water color which will adhere to a rubber base. The models may be obtained from the American Heart Association, 1775 Broadway, New York 19, N. Y. (Circulation, June 1952, J. S. Butterworth, C. A. R. Connor, O. W. Richards & H. K. Taylor)

3. For the week ending 14 June 1952, a total of 296 cases of poliomyelitis was reported in the United States as compared with 218 the previous week, and 162 for the corresponding week of 1951. Of this total more than two-thirds of the cases were in 5 southern States and in California. California and Texas have been reporting about half the total cases since the beginning of the "disease year" which began with the week ending 5 April. (News Release, FSA, PHS, 19 June 1952)

4. A discussion of the technic of arthoplasty of the hip and the results obtained with the acrylic femoral head prosthesis appears in the Journal of Bone and Joint Surgery, British Volume, May 1952, Robert & Jean Judet.

5. A booklet "Planning Low Sodium Meals" and its 9 diet lists are designed to help cardiacs and the patients who are placed on sodium restriction. The booklet is published by the Newton, Massachusetts Health Department in collaboration with other interested activities and may be obtained from the Newton Health Department. (Health Dept., Newton, Mass.)

6. A Dictation system permits several persons to dictate by telephone to one machine by remote control. Control buttons allow the dictator to play back part or all of his dictation, to indicate corrections, and to signal his secretary. (Science News Letter, 31 May 1952)

7. An article reviewing briefly pertinent investigative work accomplished since the war years and making some deductions regarding its usefulness in the

actual care and management of burns appears in American Journal of Surgery, June 1952, C. W. McLaughlin, Jr. & D. K. Neis.

8. A symposium on ACTH and Cortisone in diseases of the chest with Dr. E. R. Levine acting as moderator appears in Diseases of the Chest, June 1952.

9. A pathologic study was made of tuberculosis among Negroes with and without sickle-cell anemia. Negroes with sickle-cell anemia show a higher incidence of pleuropulmonary inflammatory disease, as evidenced by a higher incidence of pleural adhesions and a higher incidence of the various forms of tuberculosis than do Negroes without sickle-cell anemia. (Am. Rev. Tuberc., June 1952, W. Weiss & S. O. Waife)

10. Experimental work in the dog to quantitate the effects of massive transfusions of hemolyzed whole blood is reported in Surgery, June 1952, W. G. Schenk Jr., C. E. Wiles, Jr. & J. Lindenberg.

11. The exercise performance of 20 normal subjects and 20 patients with various cardiorespiratory diseases has been evaluated by means of a new step test in comparison with a previously described treadmill procedure. (Am. J. Med. Sci., June 1952, G. F. Welch et al.)

12. The mechanism, reduction technique, and results in fractures of the os calcis are discussed in British Journal of Surgery, March 1952, P. Essex-Lopresti.

13. Glare reducing glasses cut down annoying light from skies and sand by a metallic coating that is thicker at the top and bottom of the lenses than at the middle. (Science News Letter, 21 June 1952)

14. Mutual rabies control program and the prompt reporting of rabies cases in all animals were among the recommendations made at the South Middle Atlantic Regional Rabies Conference which met in Washington in June 1952. The conference was called by the Public Health Service and was co-sponsored by the Fish and Wildlife Service of the Interior Department and the Bureau of Animal Industry of the Department of Agriculture. (News Release, FSA, PHS, June 1952)

15. "Toxoplasmosis" a report comprising 105 pages and 91 illustrations is published by the Public Health Service. The report presents clinical histories of 5 fatal and 2 surviving cases of toxoplasmosis in infants together with autopsy findings of 4 of the fatal cases.

16. Recent additions to the list of Navy Medical Corps officers certified by American Boards are Captain J. B. Shuler (American College of Chest Physicians), CDR J. H. Cox (Dermatology and Syphilology), CDR H. Wilson Jr. (Pathology), CDR J. L. Yon (American College of Surgeons) and LT H. R. Morse (Otolaryngology). (TIO, BuMed)

BUMED CIRCULAR LETTER 52-51 5 June 1952

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Medical Department funds for ships, Fiscal Year 1953

Ref: (a) BUMED Cir Ltr 51-54
(b) BUMED Cir Ltr 50-53
(c) BUMED Cir Ltr 51-96 (as modified by BUMED Cir Ltr 51-138)
(d) BUMED Cir Ltr 51-100 (as modified by BUMED Cir Ltr 51-126)
(e) Article 24-11(5), Manual of the Medical Department
(f) Article 24-21, Manual of the Medical Department
(g) BUSANDA Manual, Afloat Accounting Instruction Memorandum No. 3
(h) Paragraph 25833-2, BUSANDA Manual

Encl: (1) List of vessel types and quarterly target amounts

1. Reference (a) is cancelled effective 1 July 1952. In accordance with reference (e) and paragraph 1104 of reference (g), authorization for expenditure of funds under appropriation Medical Care, Navy, for Fiscal Year 1953 is provided to the commanding officer of each type of vessel in commission with a medical and/or dental representative attached, except for hospital ships or vessels assigned to a reserve fleet or to the Military Sea Transportation Service. Hospital ships will be issued individual allotments in Fiscal Year 1953, and therefore are not included in these instructions.

2. Type vessels listed in enclosure (1) are authorized to expend funds under the appropriation 1731002.28, Medical Care, Navy, 1953, against an open allotment maintained in the Bureau of Medicine and Surgery. The amounts set forth in enclosure (1) opposite each type vessel are the quarterly target amounts to be used for the budgetary guidance of commanding officers to cover operation of the medical and dental departments. The target amount for each quarter of the fiscal year is the amount listed opposite each type vessel. Where one or more dental officers are attached, it is considered that twenty percent of the target amount will meet adequately the requirements of the dental department, although this limitation is not binding. These target amounts are not inflexible limitations the exceeding of which would invoke the penalties prescribed for over-obligating a regular allotment; however, as a matter of administrative responsibility, this amount should be exceeded only in unusual circumstances.

3. In Fiscal Year 1953 only one allotment will be established to cover the requirements of both the medical and dental department of vessels. All expenditures under the appropriation Medical Care, Navy, will be lodged against this allotment. The applicable accounting data are as follows:

Appropriation:	1731002.28 Medical Care, Navy, 1953
Bureau Control No.:	12001 (Medical and Dental Care Afloat)
Expenditure Account:	as set forth in NAVCOMP Manual
Object Classification:	various (reference (c))

As set forth in paragraph 3300 of reference (g), charges under the appropriation Medical Care, Navy, shall be made directly against the above accounting data.

4. Vessels which anticipate open purchase procurement of materials in accordance with paragraph 9 of this letter shall prepare an Annual Purchase Requisition (BUSANDA Form 44), using the following language on the face of the requisitions:

For sundry items of medical and dental supplies and minor items of medical and dental equipment; repair of and parts for medical and dental equipment; special diets for the sick; services of blood donors; in such quantities and at such time as may be required during the fiscal year 1953.

The amount of the Annual Purchase Requisition shall be only that portion of the target amount authorized by this letter which it is anticipated will be utilized for open purchase procurement. Local approval of the Annual Purchase Requisition is authorized. Commanding officers shall insure that copies of the approved requisition are forwarded to the Bureau of Medicine and Surgery.

5. Under the performance-type budget the appropriation Medical Care, Navy, is chargeable on board ship only for technical medical and dental materials and services. These charges include medical and dental supplies and equipment, medical and dental books, and repairs to technical medical and dental equipment. Such charges as laundry services and supplies, clerical supplies, and repairs to typewriters, etc., are not properly chargeable to the appropriation Medical Care, Navy.

6. By agreement with the Bureau of Ships, medical and dental departments aboard ships may request items of a technical nature to be issued from the supply officer's storeroom for use in the treatment of the sick. Such procedure, however, must be limited to emergency cases where time will not permit the procurement of such items from other sources. Under this agreement, reimbursement to the ship's operating allotment under the appropriation Ships and Facilities, Navy, from the appropriation Medical Care, Navy, will not be required.

7. Beginning in Fiscal Year 1953 medical or dental supplies and equipment, listed in the Armed Services Catalog of Medical Materiel, procured on BuMed Material Requisition (NavMed Form-4) will be issued as NSA material and will be charged to the appropriation Medical Care, Navy. Every vessel which will requisition medical or dental supplies and equipment from the medical and dental

supply depots must be authorized funds for such procurement. Therefore, any type vessel having a medical or dental representative on board, but not listed in enclosure (1), may procure necessary medical and dental materials under authority of this letter. However, a request must be submitted to the Bureau of Medicine and Surgery to be included in the listing set forth in enclosure (1). Such requests shall include dollar value by the following categories: (a) medical department supplies, (b) medical department equipment, (c) dental department supplies, and (d) dental department equipment. Certification shall be included that the estimate is based on usage rates, planned replacements, and levels of supply as authorized by reference (d).

8. Certain types of small vessels, such as yard and district craft, rarely require medical or dental stores other than those listed in the Armed Services Catalog of Medical Materiel, and therefore are not authorized funds by this letter. It is intended that such vessels will ordinarily be furnished necessary medical and dental stores, without charge by the shore station, base, tender, or larger vessel to which regularly or temporarily assigned for operations or other purposes. Certain types of sea-going vessels, such as submarines, minesweepers, etc., although authorized funds under this letter should continue to utilize the services of the base or tender to which attached except when on independent service. During periods in transit or on detached service, such vessels may obtain medical and dental stores from any naval Medical Department activity, without charge, in the following order of preference: (1) Shore stations or bases regularly supplying similar vessels; (2) any shore station or base; (3) other ships. Activities receiving such requests shall issue the essential requested medical and dental stores. If the material is not available, the request shall be so endorsed. Medical and dental stores issued to vessels of the Military Sea Transportation Services shall be subject to reimbursement and transferred in accordance with the provisions of reference (h).

9. The funds authorized by this letter are available for procurement of materials as set forth in paragraph 7 above, and for open purchase procurement of materials as defined in paragraph 5. However, items listed in the Armed Services Catalog of Medical Materiel shall be obtained from naval medical and dental supply depots except in the case of emergency. In emergency, local procurement of such items is authorized by reference (f). Such local procurement may be by open purchase procedures, or from the Department of the Army or other Government agencies on a reimbursable basis. Materials received from other Government agencies on a reimbursable basis shall be considered a charge against the target amount established for the vessel. The issuing office shall be instructed to forward the Standard Form 1080 to the Bureau of Medicine and Surgery for action.

10. Vessels having a medical and/or dental officer attached are authorized to make local procurement of professional and technical medical and dental books under authority of the approved Annual Purchase Requisition at an annual cost not to exceed $50.00. Requirements in excess of $50.00 annually must be submitted to the Bureau for approval. Vessels not having a medical and/or dental

officer attached are not authorized to make local procurement of professional and technical medical and dental books, but shall submit all such requirements to the Bureau for approval. Requests for such books shall be submitted on NAVSANDA Form 44 and shall be accompanied by a letter of justification including a list of the books presently on board.

11. Professional medical and dental periodicals are furnished vessels by the Bureau in accordance with reference (b). Vessels being placed in commission shall submit a letter request to be placed on the mailing list for such periodicals.

12. Medical and dental property accountability for vessels shall be maintained on board in the manner prescribed by current directives. Upon receipt of this letter, each vessel listed in enclosure (1) shall submit to the Bureau of Medicine and Surgery an estimate of the obligations expected to be lodged against open allotment 12001 during Fiscal Year 1953. Revised estimates shall be submitted during the fiscal year to advise the Bureau of any significant changes that occur in original obligational estimates submitted. No other financial reports are required of vessels.

H. L. Pugh

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BUMED CIRCULAR LETTER 52-52 6 June 1952

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Health Record Cover (NavMed H-1); revision in size of

Ref: (a) Section XVI, Chapter 16, ManMedDept, advance change 1-6
(b) BuMed CirLtr No. 52-13

1. The Health Record is being converted to a standard letter-size form as part of a program for standardization of medical forms by the Interagency Committee on Medical Records. At the present time two standard-size (8" x 10 1/2") forms (SF-88 and NavMed-H-10) are included in the Health Record in accordance with references (a) and (b).

2. In furtherance of the foregoing, the Health Record Cover (NavMed-H-1) has been revised to letter size (9 1/2" x 11") to replace the present Health Record Cover. The distribution will begin as supplies for issue become available through local district printing and publications offices about 1 August 1952. Special requisitions for procurement of the new NavMed-H-1 are not necessary.

3. The conversion to the new size Health Record is to be carried out gradually and in such manner as will require the minimum of additional man-hours of work.

When the revised form become available, through normal replenishment requisitioning procedures, they are to be used whenever the occasion arises for opening a new Health Record. Such conversion should be effected when an enlisted member is reenlisted or when an officer is examined incident to promotion, if not effected earlier for valid reason.

H. L. Pugh

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BUMED CIRCULAR LETTER 52-53 11 June 1952

From: Chief, Bureau of Medicine and Surgery
To: All Naval Hospitals and District Medical Offices

Subj: Air transportation by Military Air Transport Service aircraft for dependents in patient status

Ref: (a) Department of the Air Force dispatch (AFMTP.AT35099 DTG 161839Z of 16 Apr 1952

1. Reference (a) is quoted for information and guidance in the transfer of military personnel dependents while in a patient status:

"Military air transportation by MATS aircraft may be provided to military personnel dependents, in patient status, when movement from one military hospital to another within the ZI has been authorized. In the case of minors, to be moved in patient status, one parent may be designated as an attendant to accompany the minor on a space availability basis. Attendants will not be designated except when absolutely necessary. The hospital commander originating the movement of a patient will be responsible for determining when an attendant is required for a minor, reference paragraph 8, AR 40-535; CNO ltr, serial 20P56; AFR 160-52, concerning assignment of medical attendants. Any transportation to be performed by this authority will be covered by a written Directive by the commander sponsoring the patient transportation. The sponsoring commander will insure that admission has been authorized by the hospital designated to receive the patient."

2. The "CNO ltr, serial 20P56" referred to above has been redesignated and republished as OPNAV INSTRUCTION 4630.9.

H. L. Pugh

The above letter will not be published in the Navy Department Bulletin.

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BUMED CIRCULAR LETTER 52-54 13 June 1952

From: Chief, Bureau of Medicine and Surgery
To: All Stations

Subj: Allotment and project order accounting at shore activities

Ref: (a) NavComp Instruction 7303.1 of 14 May 1952
(b) MarCorp memo 50-52
(c) Manual of the Medical Department, Chapter 24, Section IV & VI
(d) BuMed Cir. Ltr. 50-6
(e) BuMed Cir. Ltr. 47-98
(f) BuMed Cir. Ltr. 51-96 (modified by BUMED Cir. Ltr. 51-138)

1. References (a) and (b) established uniform allotment accounting procedures for Navy and Marine Corps shore activities, respectively. Reference (c) is in the process of revision to eliminate articles in conflict with references (a) and (b). References (d) and (e) are hereby cancelled.

2. In the past it has generally been the policy for the medical and/or dental department of an activity to maintain allotment accounting records for allotments under the appropriation Medical Care, Navy. This policy has been superseded by policy established in references (a) and (b). Allotment accounting, as of 1 July 1952 will be performed by the fiscal officer at naval activities as set forth in reference (a) and by the office performing the supply function as set forth in reference (b).

3. The Bureau of Medicine and Surgery requires each fiscal officer or office performing the supply function, to submit NavExos 2676 in duplicate by those subobjects outlined in reference (f) for each allotment under the appropriation, Medical Care, Navy, for which he is performing the allotment accounting function.

4. At those stations where allotment accounting is performed by other than Medical Department personnel, the medical and/or dental department shall request copies or transcripts of expenditure documents under Medical Care, Navy, allotments from the fiscal officer or the office performing the supply function. These documents or transcripts shall be reflected in the Journal of Receipts and Expenditures, and Supplies and Equipment ledgers if appropriate. NavMed E shall be submitted as required heretofore.

5. The finance officer at BuMed managed activities performing allotment accounting and utilizing electric or mechanical equipment, may continue to use NavMed Form 67 providing the end results are the same as those prescribed by reference (a). At those BuMed managed activities where machine methods are not utilized, the standard forms and procedures prescribed by reference (a) shall be used. In either instance, Reservation Logs shall be maintained and strict compliance with

reference (a) shall be required in all instances except as noted above.

6. This letter has been approved by the Comptroller of the Department of the Navy.

H. L. Pugh

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BUMED CIRCULAR LETTER 52-55 16 June 1952

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: U. S. Navy Aviation Cadet Selection Tests; policy regarding retesting

Ref: (a) Art. 15-67(1)(i), ManMedDept

1. Effective immediately, applicants disqualified for naval flight training on the basis of U. S. Navy Aviation Cadet Selection Tests required by reference (a), and who desire to be reconsidered for such training, may be permitted to apply for retesting after the elapse of one full year from the date of initial testing.

2. Each applicant shall be queried as to whether he has previously applied for naval flight training. If the applicant acknowledges having previously taken the U. S. Navy Aviation Cadet Selection Tests, he shall be required to sign the following prepared statement: "At least one full year has elapsed since I took the U. S. Navy Aviation Cadet Selection Tests." Such statements shall be forwarded to the Bureau of Medicine and Surgery along with the applicants' test answer sheet.

H. L. Pugh

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BUMED CIRCULAR LETTER 52-56 26 June 1952

From: Chief, Bureau of Medicine and Surgery
To: All Medical Activities and Facilities

Subj: Object and subobject classification of Medical Department appropriational estimates, obligations, and expenditures

Ref: (a) BUMED Cir Ltr No. 51-96

1. Effective 1 July 1952, the following changes shall be made in reference (a):

a. In paragraph 5, under subobject symbol and title "019 - All Other Personal Services" delete subparagraph (2) (c) and renumber subparagraph (d) to (c).

b. Change subobject "0799 - Special Instruction" to read as follows:

"The following items shall be included hereunder:

(1) Charges for postgraduate and special courses of instruction at other than Army, Air Force and Navy activities for Medical, Dental, Medical Service, and Nurse Corps officers, and officers and enlisted personnel of the Hospital Corps when authorized by the Bureau.

(2) Services of lecturers and consultants at medical and dental activities when such services are authorized by the Bureau".

C. J. Brown
Acting

The above letter will not be published in the Navy Department Bulletin.

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